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IPR2021-00917
Patent 7,933,431

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

UNIFIED PATENTS, LLC

Petitioner,

v.

GESTURE TECHNOLOGY PARTNERS, LLC

Patent Owner

***Inter Partes* Review No. IPR2021-00917**

Patent No. 7,933,431

**PATENT OWNER'S RESPONSE TO THE PETITION
FOR *INTER PARTES* REVIEW OF U.S. PATENT NO. 7,933,431
PURSUANT TO 37 C.F.R. § 42.120**

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EXHIBIT LIST

Exhibit	Description
2001	Dkt. 65, Second Amended Docket Control Order, <i>Gesture Technology Partner, LLC v. Huawei Device Co., Ltd.</i> , No. 2:21-cv-00040-JRG (E.D. Tex. Aug. 17, 2021).

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I. INTRODUCTION

Gesture Technology Partners, LLC (“GTP” or “Patent Owner”) respectfully submits this Preliminary Response (the “Response”) to Unified Patents, LLC’s (“Unified Patents” or “Petitioner”) Petition for *Inter Partes* Review (“IPR”) No. IPR2021-00917 (the “Petition” or “Pet.”) of U.S. Patent No. 7,933,431 (the “’431 Patent”).

Institution should be denied because the Petition fails to demonstrate a reasonable likelihood that any challenged claim of the ’431 Patent is unpatentable. As detailed herein, the references applied by the Petition have numerous glaring deficiencies, failing to disclose at least the following limitations that are recited in the sole independent claim at issue in the Petition:

- [7.0]¹ Handheld computer apparatus comprising;
- [7.2] a camera means associated with said housing for obtaining an image using reflected light of at least one object positioned by a user operating said object;

¹ For convenience of reference only, this Preliminary Response adopts the claim element numbering presented in the Petition.

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- [7.3] computer means within said housing for analyzing said image to determine information concerning a position or movement of said object; and
- [7.4] means for controlling a function of said apparatus using said information.

Institution should also be denied because the Board should exercise its discretionary power to deny institution under 35 U.S.C. § 314(a). Petitioner, Unified Patents, receives subscription fees from its Members to, amongst other file petitions for *inter partes* review. But Petitioner has declined to identify whether any of the defendants in litigation involving the '431 Patent are Unified Members, thereby denying the Board and Patent Owner a full and fair opportunity to address why the Board should deny institution under *Apple Inc. v. Fintiv Inc.* (“*Fintiv*”), IPR2020-00019, Paper 11 (PTAB May 13, 2020) (precedential) and *General Plastic Industrial Co., Ltd. v. Canon Kabushiki Kaisha* (“*General Plastic*”), IPR2016-01357, Paper 19 at 15-19 (September 6, 2017) (precedential).

Finally, the Petition should be denied because the Board does not have jurisdiction over expired patents.

For these reasons, institution should be denied.

II. STATEMENT OF THE PRECISE RELIEF REQUESTED

Patent Owner requests that the Board deny institution of the Petition with respect to all challenged claims and all asserted grounds. A full statement of the reasons for the relief requested is set forth in Sections III and IV of this Response.

III. THE PETITION SHOULD BE DENIED BECAUSE IT DOES NOT ESTABLISH A REASONABLE LIKELIHOOD OF SUCCESS ON ANY CHALLENGED CLAIM

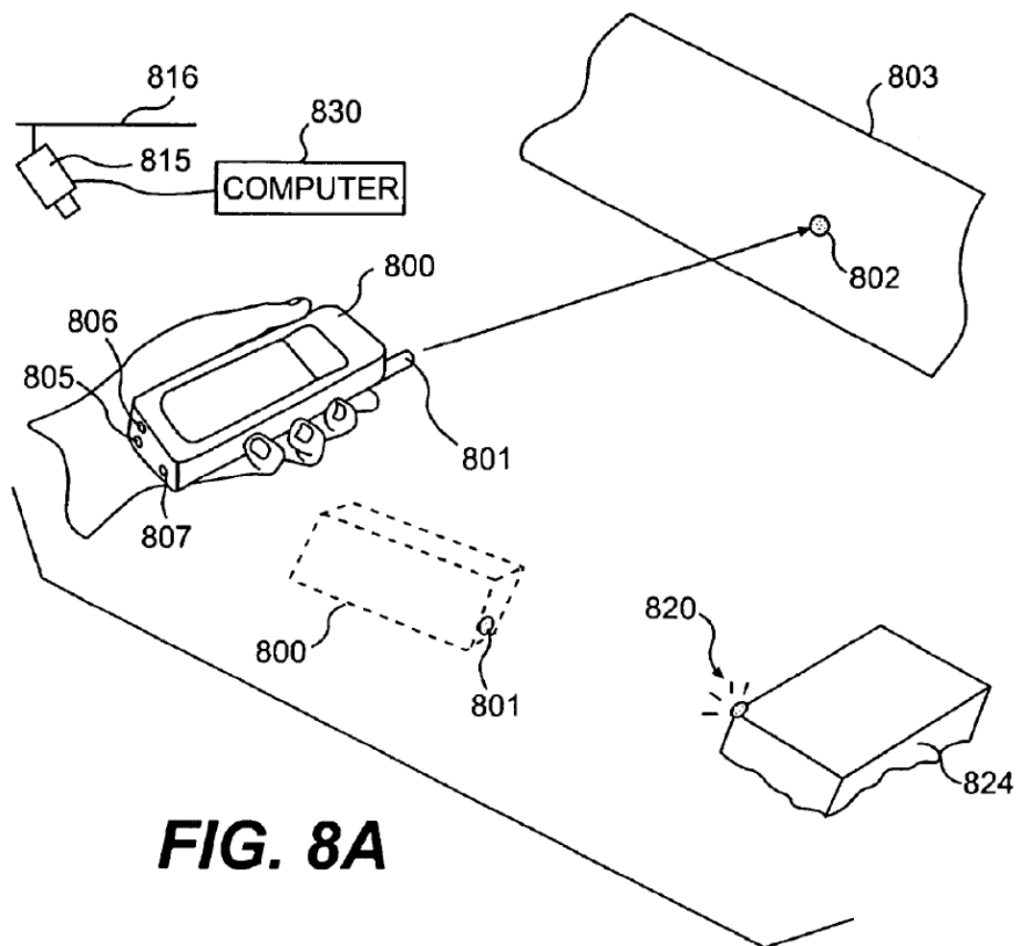
As shown below, the Petition fails to demonstrate a reasonable likelihood that Petitioner would prevail with respect to any claim of the '431 Patent. The Petition challenges claims 7-13 of the '431 Patent (the "Challenged Claims"). Pet. at 4. As detailed herein, each proposed Ground fails to disclose key limitations of each Challenged Claim. Trial should not be instituted.

A. The '431 Patent

The '431 Patent, which is entitled "Camera Based Sensing In Handheld, Mobile, Gaming, Or Other Devices," claims priority to U.S. Provisional Application No. 60/142,777 filed on July 8, 1999. *See* Ex. 1001. The '431 Patent is directed towards methods and apparatuses "to enable rapid TV camera and computer-based sensing in many practical applications, including, but not limited to, handheld devices, cars, and video games." *Id.*, Abstract. In some embodiments, the patent describes the use of computer devices and one or more cameras that "optically

sens[e] human input” with applications in a “variety of fields such as computing, gaming, medicine, and education.” *Id.*, 2:7-17.

In some embodiments, the '431 Patent discloses a handheld device, such as a cell phone, that processes imaging from a person or object to control functions on the handheld device. *Id.*, 11:62:-67. Figure 8A, which is reproduced below, depicts some embodiments in which a handheld device includes the functionality of the invention.



Ex. 1001, Fig. 8A.

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The '431 Patent describes that the handheld device can “perform a control function by determining [] position, orientation, pointing direction or other variable with respect to one or more external objects, using an optical sensing apparatus . . . or with a camera located in the handheld device, to sense datums or other information external for example to the device.” *Id.*, 12:1-9. The '431 Patent describes that the device is able to “acquire features of an object and use it to determine something” such as object recognition. Ex. A. at 13:5-21. The '431 Patent states that the purpose of some handheld embodiments is “to add functionality to the device, without complicating its base function, and/or alternatively [to] add a method to interact with the device to achieve other purposes.” *Id.* at 11:64-67.

B. Level of Ordinary Skill in the Art

For the purposes of this Response only, Patent Owner does not dispute the level of skill of a person of ordinary skill in the art (“POSITA”) identified in the Petition.

C. Claim Construction

Patent Owner does not contest the constructions proposed in the Petition because the Petition fails to demonstrate a reasonable likelihood that any challenged claim of the '431 Patent is unpatentable under Petitioner’s proposed constructions. *See* Pet., pp. 13-17. Patent Owner reserves the right to address claim construction of any term in the Challenged Claims if the Board institutes *inter partes* proceedings.

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The preamble of claim 7 should be construed as a limitation. “A preamble limits the invention if it recites essential structure or steps, or is ‘necessary to give life, meaning, and vitality’ to the claim.” *Acceleration Bay, LLC v. Activision Blizzard, Inc.*, 908 F.3d 765, 770 (Fed. Cir. Nov. 6, 2018) (quoting *Catalina Mktg. Int’l, Inc. v. Coolsavings.com, Inc.*, 289 F.3d 801, 808 (Fed. Cir. 2002)). The preamble of claim 7 does both. Claim 7 is reproduced below.

7. Handheld computer apparatus comprising:

a housing;

a camera means associated with said housing for obtaining an image using reflected light of at least one object positioned by a user operating said object;

computer means within said housing for analyzing said image to determine information concerning a position or movement of said object; and means for controlling a function of said apparatus using said information.

Ex. 1001, 25:61-26:5 (emphasis added). The preamble recites a “Handheld computer apparatus comprising.” The final limitation of claim 7 refers back to the same handheld computer apparatus for antecedent basis. So the preamble recites essential structure for claim 7.

The preamble is also necessary to give life, meaning, and vitality to claim 7. The ’431 Patent discloses different embodiments of Dr. Pryor’s inventions. In some

embodiments, the invention is provided in the form of a computer. *See, e.g.*, Ex. 1001, Fig. 1A. In some other embodiments, the invention is provided in a handheld device, such as a cell phone. *See id.*, 12:59-13:7. Claim 7 purposely recites a “handheld device” to claim the handheld-device embodiments disclosed in the specification. Thus, the preamble is necessary to give life, meaning, and vitality to claim 7, consistent with the embodiments that the inventor chose to claim.

Accordingly, the preamble of claim 7 should be construed as a limitation.

D. Ground 1 – The Combination of Doi and Cousins Does Not Render Claims 7-12 Obvious

The combination of Doi and Cousins does not render claims 7-12 obvious.

1. Independent Claim 7

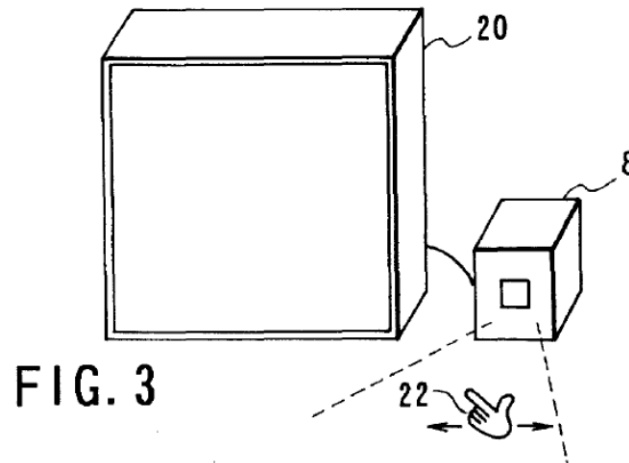
The combination of Doi and Cousins does not render independent claim 7 obvious because they do not teach or suggest the following elements of independent claim 7.

i. [7.0] Handheld computer apparatus comprising:

Claim element [7.0] recites a “handheld computer apparatus comprising.” The Petition concedes that the Doi reference (Ex. 1005) does not disclose a handheld computer apparatus. Pet., p. 21 (“*Doi* teaches . . . a *computer apparatus* as recited. . . . *Cousins* supplements the teachings of *Doi* and discloses that such an apparatus may be *handheld*. . . .”). This is not surprising because Doi teaches a computer system that is not handheld. For example, Figure 3, which is reproduced

below, depicts a display device (20) and the housing (8) of the image input unit (1).

Id., 7:63-64.



Ex. 1005, Fig. 3. The housing for the image input unit is depicted as being physically separate from the display device. *See id.*, Fig. 3. Doi discloses a generic “computer” that consists of many units (e.g., “image input unit,” “image storage unit,” “shape interpreting unit,” “interpretation rule storage unit,” “cursor switching unit,” “presenting unit”), none of which are described as being within the same housing, let alone being within the same handheld device. *See, e.g.*, Ex. 1005, 7:13-40, Fig. 1.

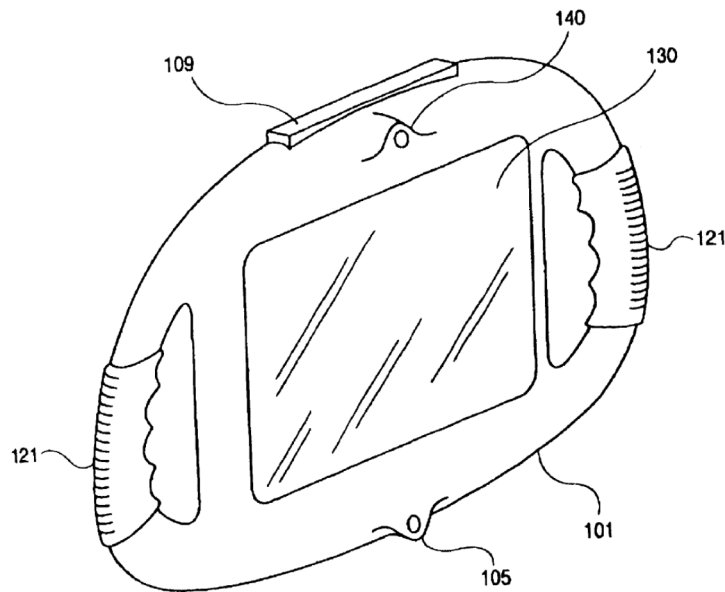
The Petition attempts to address this shortcoming in Doi by combining it with the Cousins reference (Ex. 1006). Pet., pp. 21-22. The Petition cites to only the Abstract of Cousins for support. *See id.* Although the Abstract does describe the

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device of Cousins as being handheld, it does not describe any of the functionality of claim 7, nor does it describe the functionality of Doi. *See* Ex. 1006, Abstract.

It would not have been obvious to a person of ordinary skill in the art to modify Doi, based on Cousins, such that the device of Doi would be handheld as the Petition asserts. *See* Pet., pp. 21-22 (citing Pet., § VI.A.1.c).

First, the references do not teach, suggest, or contain motivation to use a handheld device as recited in claim 7. The Petition incorrectly states that “*Cousins* provides an explicit teaching, suggestion, or motivation to use its hand-held device in a manner consistent with the teachings of *Doi*; for example, *Cousins* states that its imaging device can be used with hand gestures for input to a computer.” *See* Pet., p. 19 (citing Ex. 1006, 13:33-47). This is a mischaracterization of the Cousins reference. The cited portion of Cousins, column 13, lines 33-47, describes “using an imaging device 100 along with an expert system” to, for example, read sign language. *See* Ex. 1006, 13:33-47 (emphasis added). Imaging device 100 is the handheld device depicted in Figure 2 of Cousins.

**Figure 2**100

Ex. 1006, Fig. 2.

Cousins expressly describes using an “expert system” other than the alleged handheld device (i.e., imaging device 100) to allegedly perform the functions recited in claim 7. To the extent those functions are performed, they are performed in a device that is physically separate from what the Petition identifies as the handheld device. Thus, Cousins teaches away from modifying Doi to a handheld device.

Second, the alleged “implicit motivation to combine the teachings of *Doi* and *Cousins*” is generic and non-specific. *See* Pet., pp. 19-20. The Petition merely alleges that there would have been implicit motivation to combine the Doi and Cousins references to make a product that is smaller. *See id.*, p. 20. But the Petition provides no support. Moreover, to the extent that either Cousins or Doi disclose the

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remaining functionality recited in claim 7, the alleged “implicit motivation” is contradicted by the fact that both Cousins and Doi require external, non-handheld devices to perform that functionality. Thus, the alleged “implicit motivation” is nothing more than impermissible hindsight.

Third, the Petition alleges, without support, that “combining the teachings of *Doi* and applying them to the *handheld* apparatus of *Cousins* would have been no more than the simple substitution of one known element for another, and would have been obvious at the time of the ’431 Patent.” *See* Pet., pp. 20-21. That only support for that allegation is the same mischaracterization of the Cousins reference. *See id.* But, as shown above, Cousins expressly discloses the use of a separate “expert system” to allegedly perform the functions recited in claim 7. So the assertion that modifying Doi in view of Cousins would be a simple substitution is baseless. Moreover, the alleged support from the Schmandt declaration is conclusory and based solely on the same mischaracterization of Cousins. *See* Ex. 1003, ¶¶80-81.

Fourth, there is no evidence that there would have been a reasonable expectation of success in combining Doi and Cousins. To the contrary, both references clearly require a separate, non-handheld system to allegedly perform the functionality recited in claim 7.

Fifth, Cousins cannot be used to modify Doi because it is non-analogous art. A reference qualifies as prior art for an obviousness determination only when it is

analogous to the claimed invention. *See In re Klein*, 647 F.3d 1343, 1348 (Fed. Cir. 2011). Two separate tests define the scope of analogous prior art: (1) whether the art is from the same field of endeavor, regardless of the problem addressed and, (2) if the reference is not within the field of the inventor's endeavor, whether the reference still is reasonably pertinent to the particular problem with which the inventor is involved. *See Donner Technology, LLC v. Pro Stage Gear, LLC*, No. 2020-1104, slip op. at 7 (Fed. Cir. Nov. 9, 2020). When addressing whether a reference is analogous art with respect to a claimed invention under a reasonable-pertinence theory, the problems to which both relate must be identified and compared. *See id.* at 8. Cousins fails both tests.

Regarding the first test for analogous art, in the field of invention section, Cousins expressly discloses: "The invention relates generally to a multi-purpose portable imaging device, and more particularly to a device for displaying images from sensors embedded in a hand-held device. . . ." Ex. 1006, 1:19-22. Cousins further describes itself as "a multi-purpose portable imaging device." *Id.*, 4:15-16. Those imaging devices include X-rays, MRI, sonar, and radar systems. *See id.*, 1:34-45. The detailed description further describes the design of an imaging device and the use of the imaging device in a variety of fields including medicine, construction, geology, archeology, airport security, forensic investigations, etc. *See, e.g., id.* at

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6:13-25. Accordingly, the field of endeavor for Cousins is imaging devices and image generation.

In contrast, Petitioner contends that the field of endeavor of the '431 Patent (Ex. 1001) is input devices for computers such as handheld devices. *See* Pet., p. 19; *see also* Ex. 1003, ¶ 77. Thus, based on Petitioner's own characterization of the '431 Patent, Cousins is non-analogous art because it is not from the same field of endeavor.

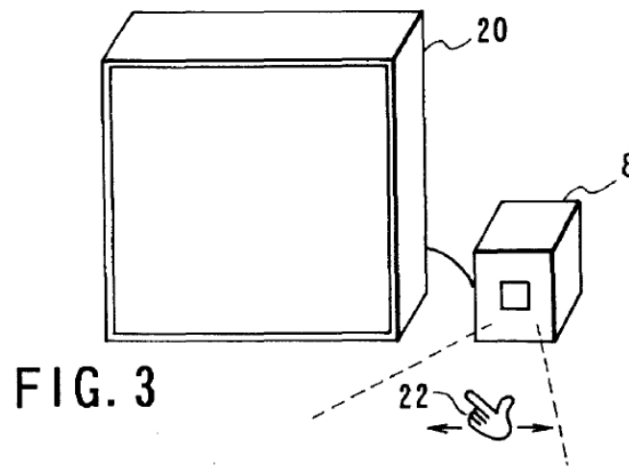
Regarding the second test for analogous art, Petitioner has the burden of identifying and comparing the problems to which both the '431 Patent and Cousins relate. Petitioner has done neither. *See* Pet., pp. 18-21. Thus, Petitioner has not met this burden. As a result, Cousins fails the second test.

For at least these reasons, neither Doi nor Cousins, nor the combination teaches or suggests claim element [7.0].

ii. [7.2] a camera means associated with said housing for obtaining an image using reflected light of at least one object positioned by a user operating said object

Claim element [7.2] recites "a camera means associated with said housing for obtaining an image using reflected light of at least one object positioned by a user operating said object." The Petition contends that "image input unit 10" disclosed in Doi discloses this limitation. Pet., p. 23. It does not. First, as a preliminary matter, the Petition fails to identify any housing in Doi for claim element [7.1]. Pet,

p. 22. Second, Figure 3, which is reproduced below, depicts a display device (20) and the housing (8) of the image input unit (1) as being physically separate. *Id.*, 7:63-64.



Ex. 1005, Fig. 3. Third, claim element [7.3] requires that the “computer means” be located within the same housing that the “camera means” is associated with. *Compare* claim element [7.2] *with* claim element [7.3]. The Petition provides no citations to Doi to support its bare allegation that the alleged “computer means” is located within display device (20), which the Petition identifies (without prior identification for claim element [7.1]) as the alleged housing. *See* Pet., p. 25 (“A POSITA would have recognized *Doi*’s computer means to be *within* the housing depicted as element 20 in Figure 3, or alternatively, *within* the housing depicted as element 8.”). To the contrary, Doi discloses many units (e.g., “image input unit,” “image storage unit,” “shape interpreting unit,” “interpretation rule storage unit,”

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“cursor switching unit,” “presenting unit”), none of which are described as being within the same housing, let alone being within the same handheld device. *See, e.g.*, Ex. 1005, 7:13-40, Fig. 1.

The Petition attempts to address this failure of Doi by relying on the Cousins reference. *See* Pet., pp. 23-24. Cousins fails for similar reasons. The alleged camera means is part of the housing of imaging device 100. *See id.*, p. 24. But the Petition fails to allege, let alone show that “processor array 400” in imaging device 100 performs the recited functions for the “computer means” under Petitioner’s proposed construction. *See id.*, pp. 25-26.

Moreover, a skilled artisan would not have been motivated to combine Dao and Cousins for the same reasons set forth above for claim element [7.0]. For at least these reasons, neither Doi nor Cousins, nor the combination teaches or suggests claim element [7.2].

iii. [7.3] computer means within said housing for analyzing said image to determine information concerning a position or movement of said object

Claim element [7.3] recites “computer means within said housing for analyzing said image to determine information concerning a position or movement of said object.” The Petition does not clearly identify what the alleged “computer means” is in Doi. But it proceeds to, without citing any support in Doi, to allege that a “POSITA would have recognized *Doi*’s computer means to be *within* the housing

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depicted as element 20 in Figure 3, or alternatively, *within* the housing depicted as element 8.” *See* Pet., p. 25. That Petitioner has to identify the location of the computer means in the alternative highlights the fact that Petitioner has no basis to allege that the alleged “computer means” in Doi is within the housing.

Petitioner attempts to address this shortcoming of Doi by relying on Cousins. *See* Pet., p. 26. Cousins fails to disclose this limitation because the Petition fails to allege, let alone show that the “processor array 400” disclosed in Cousins performs the recited functions identified by Petitioner for the term “computer means within said housing” *Compare* Pet., p. 14 *with id.*, pp. 26-27.

Moreover, a skilled artisan would not have been motivated to combine Dao and Cousins for the same reasons set forth above for claim element [7.0]. For at least these reasons, neither Doi nor Cousins, nor the combination teaches or suggests claim element [7.3].

iv. [7.4] means for controlling a function of said apparatus using said information

Claim element [7.4] recites “means for controlling a function of said apparatus using said information.” Claim 7 requires that the “computer means” be part of a handheld computer apparatus. The Petition contends that this element is met by the “interpretation rule storage unit” in Doi, but again fails to identify the physical

location of that unit within Doi, let alone show that it is part of a handheld computer apparatus. *See* Pet., pp. 28-30.

Moreover, a skilled artisan would not have been motivated to combine Dao and Cousins for the same reasons set forth above for claim element [7.0]. For at least these reasons, neither Doi nor Cousins, nor the combination teaches or suggests claim element [7.4].

For at least the reasons given above, the combination of Doi and Cousins fails to render independent claim 7 unpatentable.

2. Dependent Claim 8

Dependent claim 8 recites “Apparatus according to claim 7, wherein said object is a finger.” Claim 8 depends from and adds limitations to claim 7. The combination of Doi and Cousins fails to render claim 7 unpatentable, therefore, the combination of Doi and Cousins fails to render dependent claim 8 unpatentable for at least the same reasons.

3. Dependent Claim 9

Dependent claim 9 recites “Apparatus according to claim 7, further including a display function which is controlled.” Claim 9 depends from and adds limitations to claim 7. The combination of Doi and Cousins fails to render claim 7 unpatentable, therefore, the combination of Doi and Cousins fails to render dependent claim 9 unpatentable for at least the same reasons.

4. Dependent Claim 10

Dependent claim 10 recites “Apparatus according to claim 9, wherein said display is 3D display.” Claim 10 depends from and adds limitations to dependent claim 9 and independent claim 7. The combination of Doi and Cousins fails to render claims 7 and 9 unpatentable, therefore, the combination of Doi and Cousins fails to render dependent claim 10 unpatentable for at least the same reasons.

5. Dependent Claim 11

Dependent claim 11 recites “Apparatus according to claim 7, further including means for transmitting information.” Claim 11 depends from and adds limitations to claim 7. The combination of Doi and Cousins fails to render claim 7 unpatentable, therefore, the combination of Doi and Cousins fails to render dependent claim 11 unpatentable for at least the same reasons.

Moreover, the Petition fails to provide any analysis regarding whether Cousins discloses this limitation under Petitioner’s proposed construction of the term “means for transmitting information.” *See* Pet., p. 32. The Petition asserts that the recited function for this limitation is “transmitting information.” *See id.*, p. 17. The Petitioner further asserts that the corresponding structure for performing the recited function is “a mobile phone link and equivalents thereof.” *See id.*

The Petition states that Cousins performs the recited function, but fails to address whether Cousins discloses the same corresponding structure that the Petition

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identifies in Petitioner's proposed construction. *See* Pet., pp. 47-48. The Petition cites to a single portion of Cousins that discloses "using ground-base [*sic*] wireless or satellite technology." *See id.*, p. 48 (citing Ex. 1006, 5:26-29). The Petition fails to identify a "mobile phone link" in Cousins.² *See id.* Nor does it contain any analysis regarding whether the "ground-base [*sic*] wireless or satellite technology" disclosed in Cousins is an equivalent of a mobile phone link, as proposed by Petitioner. *See id.*

6. Dependent Claim 12

Dependent claim 12 recites "Apparatus according to claim 7, further including a light source for illuminating said object." Claim 12 depends from and adds limitations to claim 7. The combination of Doi and Cousins fails to render claim 7 unpatentable, therefore, the combination of Doi and Cousins fails to render dependent claim 12 unpatentable for at least the same reasons.

E. Ground 2 – The Combination of Doi, Cousins, and Parulski Does Not Render Claim 13 Obvious

Dependent claim 13 depends from and adds limitations to claim 7. For at least the reasons discussed above with respect to Ground 1, the combination of Doi and

² Indeed, the Petition concedes that neither Doi nor Cousins discloses adds another reference to the combination, Parulski, as allegedly disclosing the "cellular phone" required by claim 13. *See* Pet., pp. 50-51.

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Cousins does not teach or suggest multiple limitations of claim 7. Parulski does not remedy those deficiencies, and the Petition does not so assert. *See* Pet., pp. 33-34.

F. Ground 3 – Numazaki Does Not Anticipate Claims 7-9 and 11-12

Numazaki does not anticipate claims 7-9 and 11-12.

1. Independent Claim 7

Numazaki not anticipate independent claim 7 it does not teach or suggest the following elements of independent claim 7. Petitioner’s assertion that claims 7-9 and 11-12 are anticipated by the Numazaki reference is contradicted by IPR2021-00920, which asserts that those claims are rendered obvious by Numazaki. *See Apple Inc. v. Gesture Technology Partners LLC*, No. IPR2021-00920, Paper 1 at 4.

- i. [7.2] a camera means associated with said housing for obtaining an image using reflected light of at least one object positioned by a user operating said object

Claim element [7.2] recites “a camera means associated with said housing for obtaining an image using reflected light of at least one object positioned by a user operating said object.” Claim 7 requires that the “camera means” obtain an image. The Petition contends that Numazaki’s “photo-detection sensor unit” discloses this element. *See* Pet., p. 37. It does not. Numazaki fails to provide any details regarding the function of the “photo-detection sensor unit” and thus fails to disclose the “photo-detection sensor unit” obtains an image, as required by claim element [7.2].

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Numazaki's "photo-detection sensor unit" is disclosed for the first time in Numazaki's eighth embodiment. Numazaki's first through seventh embodiments are completely silent regarding the existence of the "photo-detection sensor unit." The Petition attempts to equate the "photo-detection sensor unit" with the "reflected light extraction unit" of Numazaki's first embodiment. *See* Pet., p. 37. This is improper. By virtue of having different names, Numazaki's "photo-detection sensor unit" and Numazaki's "reflected light extraction unit" must be different units with different functions. Thus, the purported functions of the "reflected light extraction unit" are not the functions of the "photo-detection sensor unit."

For at least these reasons, Numazaki fails to disclose claim element [7.2].

ii. [7.3] computer means within said housing for analyzing said image to determine information concerning a position or movement of said object

Claim element [7.3] recites "computer means within said housing for analyzing said image to determine information concerning a position or movement of said object." Claim element [7.3] requires, in part, that the "computer means" be capable of analyzing an image from a camera means to determine position or movement information of the object. *Compare* claim element [7.3] *with* claim element [7.2]. The Petition contends that Numazaki's "feature data generation unit" discloses this element. Pet, pp. 38-39. It does not.

Numazaki discloses a “reflected light extraction unit 102” with a “first photo-detection unit 109,” a “second photo-detection unit 110,” and a “difference calculation unit 111.” Ex. 1007, 10:57-66, 11:20-51, Fig. 2. Each “photo-detection unit” is necessary. The first photo-detection unit 109 requires that a lighting unit 101 emit light during detection. *Id.* at 11:26-30, Fig. 2. Later, at a different time, when first photo-detection unit 109 is not active, the second photo-detection unit 110 detects while lighting unit 101 is not active. *Id.*, 11:30-32, Fig. 2. Those two images—the image from first photo-detection unit 109 and second photo-detection unit 110—are then subtracted from each other before the information is used in the remainder of the system. *See id.*, 11:43-56. Thus, Numazaki requires: (1) two, not one, photo-detection units; (2) a lighting unit for illumination; (3) timing circuitry that selectively activates the lighting unit based on which photo-detection unit is active; and (4) circuitry for subtracting one image from another. Simply put, this is fundamentally different than the apparatus recited in claim 7.

Under Petitioner’s proposed construction, the corresponding structure for the “camera means . . .” term is “one or more TV cameras.” *See Pet.*, p. 14. Claim 7 requires that those one or more TV cameras obtain an image. Ex. 1001, 25:63-65. Under Petitioner’s proposed construction of the “computer means . . .” term, the corresponding structure must be capable of analyzing target images of an object captured by the camera means (i.e., the “one or more TV cameras”). *See Pet.*, p. 15.

The alleged “computer means” disclosed in Numazaki cannot analyze target images of an object from one TV camera. The alleged “computer means” disclosed in Numazaki cannot analyze target images without a lighting unit to illuminate the object. And the alleged “computer means” disclosed in Numazaki cannot analyze target images of an object without circuitry for subtracting one image from another. Accordingly, Numazaki does not disclose corresponding structure for performing the recited function of claim element [7.3].

For at least these reasons, Numazaki fails to render independent claim 7 unpatentable.

2. Dependent Claim 8

Dependent claim 8 recites “Apparatus according to claim 7, wherein said object is a finger.” Claim 8 depends from and adds limitations to claim 7. Numazaki fails to render claim 7 unpatentable, therefore, Numazaki fails to render dependent claim 8 unpatentable for at least the same reasons.

3. Dependent Claim 9

Dependent claim 9 recites “Apparatus according to claim 7, further including a display function which is controlled.” Claim 9 depends from and adds limitations to claim 7. Numazaki fails to render claim 7 unpatentable, therefore, Numazaki fails to render dependent claim 9 unpatentable for at least the same reasons.

4. Dependent Claim 11

Dependent claim 11 recites “Apparatus according to claim 7, further including means for transmitting information.” Claim 11 depends from and adds limitations to claim 7. Numazaki fails to render claim 7 unpatentable, therefore, Numazaki fails to render dependent claim 11 unpatentable for at least the same reasons.

Moreover, the Petition fails to provide any analysis regarding whether Numazaki discloses this limitation under Petitioner’s proposed construction of the term “means for transmitting information.” *See* Pet., pp. 41-42. The Petition asserts that the recited function for this limitation is “transmitting information.” *See id.*, p. 17. The Petitioner further asserts that the corresponding structure for performing the recited function is “a mobile phone link and equivalents thereof.” *See id.*

The Petition states that Numazaki performs the recited function, but fails to address whether Numazaki discloses the same corresponding structure that the Petition identifies in Petitioner’s proposed construction. *See* Pet., pp. 41-42. The Petition cites to a single portion of Numazaki that discloses a “transmission unit 356.” *See id.*, p. 42 (citing Ex. 1007, 40:45-49). The Petition fails to identify a

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“mobile phone link” in Cousins.³ *See id.* Nor does it contain any analysis regarding whether the “transmission unit 356” disclosed in Numazaki is an equivalent of a mobile phone link, as proposed by Petitioner. *See id.*

5. Dependent Claim 12

Dependent claim 12 recites “Apparatus according to claim 7, further including a light source for illuminating said object.” Claim 12 depends from and adds limitations to claim 7. Numazaki fails to render claim 7 unpatentable, therefore, Numazaki fails to render dependent claim 12 unpatentable for at least the same reasons.

G. Ground 4 – Rhoads Does Not Render Claims 7, 9, and 11 Obvious

Rhoads does not render claims 7, 9, and 11 obvious.

1. Independent Claim 7

Rhoads does not render independent claim 7 obvious because it does not teach or suggest the following elements of independent claim 7.

- i. [7.0] Handheld computer apparatus comprising:

³ Indeed, the Petition concedes that Numazaki does not disclose a “mobile phone link” because the Petition does not allege that Numazaki anticipates claim 13, which requires that the claimed apparatus “is a cellular phone.”

Claim element [7.0] recites a “Handheld computer apparatus comprising.” The Petition contends that this limitation is disclosed by the disclosure in Rhoads of a “palmtop computer.” *See* Pet, pp. 43-44 (citing Ex. 1004, ¶288). The only evidence cited by the Petition to allege that the “palmtop computer” disclosed in Rhoads is a handheld computer apparatus is the Microsoft Computer Dictionary (Ex. 1011). *See id.* The Schmandt declaration is conclusory and merely parrots the arguments from the Petition. *See* Ex. 1003, ¶¶182-84. The Microsoft Computer Dictionary does not state that a palmtop is a handheld device. *See* Ex. 1011, p. 330. To the contrary, the same dictionary contains a separate definition for “handheld PC,” which indicates that a palmtop is not a handheld PC. Petitioner did not provide or cite to the definition of “handheld PC,” nor was it relied upon by Petitioner’s expert. *See id.*

Rhoads also contradicts Petitioner’s assertion that the “palmtop computer” is a handheld computer apparatus. The Petition cites to paragraph 288 of Rhoads as support for this claim element. *See* Pet, pp. 43-44. The next paragraph discloses an actual handheld device: “a Bedoop sensor that is movable around a desk or other work-surface, like a mouse.” Ex. 1004, ¶289. Notably, that device is not a computer apparatus, but merely a sensor that provides image information to a separate computer that is not handheld. *See id.* The Petition does not contain any argument

or rationale for why a person of ordinary skill in the art would modify Rhoads to meet this limitation. *See* Pet, pp. 43-44.

For at least these reasons, Rhoads does not teach or suggest claim element [7.0].

ii. [7.3] computer means within said housing for analyzing said image to determine information concerning a position or movement of said object

Claim element [7.3] recites “computer means within said housing for analyzing said image to determine information concerning a position or movement of said object.” The Rhoads reference uses the coined term “Bedoop” throughout its disclosure. The Petition does not provide any description of the term or its use throughout Rhoads, but understanding that coined term is important to understanding the disclosure of Rhoads. Rhoads defines “Bedoop data” as “any form of digital data encoding recognized by the system.” Ex. 1004, ¶16. For example, “[t]he artwork on a milk carton can be adapted to convey Bedoop data. In the preferred embodiment, the Bedoop data is steganographically [*sic*] encoded (e.g., digitally watermarked) on the carton.” Ex. 1004, ¶17. Another example is encoding Bedoop data on a birthday card. Ex. 1004, ¶76. In essence, the Bedoop data is a watermarked barcode.

The Petition cites to a single paragraph of Rhoads (¶404) as alleged support for the computer means being with said housing, as is required by claim element [7.3]. *See* Pet., p. 48. That paragraph is reproduced below:

[0404] A user, equipped with a portable appliance that merges the functions of palmtop computer and digital camera, can snap an image of the poster. The processor can decode the watermarked data, and initiate any of various links based on the decoded data.

Ex. 1004, ¶404.

Notably, Rhoads describes the “portable appliance” as containing a processor that can only “decode the watermarked data,” i.e., read a Bedoop barcode. *See id.* Reading a barcode is not determining the position or movement of an object as is required by this claim element. Nor does Rhoads teach or suggest that the “portable appliance” embodiment determines the position or movement of an object. *See id.*

The other portions of Rhoads cited by the Petition for this claim element pertain to different functionality—“determine[ing] the scale state, rotation state, X-Y offset, and differential scale state, of an object.” *See* Pet., pp. 48 (citing Ex. 1004, ¶¶144-45, ¶151). Determining those states of an object is not the same as reading a Bedoop barcode, which is the only functionality disclosed for the portable appliance. The Petition does not contain any argument or rationale for why a person of ordinary

skill in the art would modify the “portable appliance” embodiment of Rhoads to meet this limitation. *See* Pet, pp. 47-49.

For at least these reasons, Rhoads does not teach or suggest claim element [7.3].

For at least the reasons given above, Rhoads fails to render independent claim 7 unpatentable.

2. Dependent Claim 9

Dependent claim 9 recites “Apparatus according to claim 7, further including a display function which is controlled.” Claim 9 depends from and adds limitations to claim 7. Rhoads fails to render claim 7 unpatentable, therefore, Rhoads fails to render dependent claim 9 unpatentable for at least the same reasons.

3. Dependent Claim 11

Dependent claim 11 recites “Apparatus according to claim 7, further including means for transmitting information.” Claim 11 depends from and adds limitations to claim 7. Rhoads fails to render claim 7 unpatentable, therefore, Rhoads fails to render dependent claim 11 unpatentable for at least the same reasons.

Moreover, the Petition fails to provide any analysis regarding whether Rhoads discloses this limitation under Petitioner’s proposed construction of the term “means for transmitting information.” *See* Pet., pp. 51-52. The Petition asserts that the recited function for this limitation is “transmitting information.” *See id.*, p. 17. The

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Petitioner further asserts that the corresponding structure for performing the recited function is “a mobile phone link and equivalents thereof.” *See id.*

The Petition fails to allege, let alone show that Rhoads performs the recited function of transmitting information. *See id.*, pp. 51-52. The Petition also fails to address whether Rhoads discloses the same corresponding structure that the Petition identifies in Petitioner’s proposed construction. *See id.* The Petition cites to a single portion of Rhoads that discloses a “a network connection 16 to the internet 18.” *See id.*, p. 51 (citing Ex. 1004, ¶16). The Petition fails to identify a “mobile phone link” in Rhoads.⁴ *See id.* Nor does it contain any analysis regarding whether the “network connection 16 to the internet 18” disclosed in Rhoads is an equivalent of a mobile phone link, as proposed by Petitioner. *See id.*

IV. THE PETITION SHOULD BE DENIED UNDER 35 U.S.C. § 314(a)

The Board has discretion as to whether to institute *inter partes* review. *See* 35 U.S.C. §314(a); *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2140 (2016) (“[T]he agency’s decision to deny a petition is a matter committed to the Patent Office’s discretion.”). In *Fintiv*, the Board recognized that in some instances the

⁴ Indeed, the Petition concedes that Rhoads does not disclose a “mobile phone link” because the Petition does not allege that Rhoads renders claim 13 unpatentable—claims 13 requires that the claimed apparatus “is a cellular phone.”

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considerations of “efficiency, fairness, and the merits support the exercise of authority to deny institution in view of an earlier trial date in the parallel proceeding,” and identified six factors to evaluate when determining whether to exercise the Board’s discretion. *Fintiv*, Paper 11 at 5-6. In *General Plastic*, the Board recognized “the potential for abuse of the review process by repeated attacks on patents.” *General Plastic*, Paper 19 at 17. In an attempt to mitigate such abuse, the Board identified seven factors that it considers in determining whether to institute decision of a subsequent petition. *Id.* at 16. Common to each set of factors (and the corresponding analysis) is the correct identification of the Petitioner. *Fintiv*, Paper 11 at 6; *General Plastic*, Paper 19 at 16.

Petitioner, Unified Patents, has denied Patent Owner and the Board of the ability to analyze the *Fintiv* and *General Plastic* factors by concealing the identity of its Members. Unified Patents submitted a five-page declaration of its founder and current CEO, Kevin Jakel, with the Petition (Ex. 1020) in support of its argument that the Board should not exercise its discretion to deny institution under 35 U.S.C. § 314(a). *See* Pet., pp. 53-55. At no point in those five pages does Mr. Jakel deny that one or more of its Members is a party to one of the “Parallel Litigations” identified in the Petition. As the Petition recognizes, the following parties are defendants in litigation before the United States District Courts for the Eastern and Western Districts of Texas:

- Huawei Device Co., Ltd.;
- Samsung Electronics Co., Ltd.;
- Apple Inc.;
- Lenovo Group Ltd.; and
- LG Electronics, Inc.

Pet., p. 1 (identifying the “Parallel Litigations”). But the Petition and Mr. Jakel’s declaration fail to identify whether any of those defendants is also a Member of Unified Patents. It is highly unlikely that Unified Patents chose to expend the resources necessary to prepare and file the Petition unless at least one of its Members is a defendant in the Parallel Litigations. Instead, Unified Patents chose to file the Petition in response to one or more of its Members being accused of infringing the ’431 Patent. Unified likely monitors litigation activity of its Members and, in some instances, files petitions for *inter partes* review because Unified’s Members pay it a yearly subscription fee to do exactly that. *See* Ex. 1020, ¶2.

The identity of the Member(s) that are also defendants in the Parallel Litigations is material to the *Fintiv* analysis because the Parallel Litigations are in different courts with different trial schedules. For example, the Samsung and Huawei defendants are consolidated for pretrial proceedings in *Gesture Technology Partner, LLC v. Huawei Device Co., Ltd.*, No. 2:21-cv-00040-JRG (E.D. Tex.). Trial in that case is scheduled for March 7, 2022, more than eight months before a

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final written decision would be due in this proceeding. Ex. 2001 at 1. As a result, several of the *Fintiv* factors might weigh in favor of the Board denying institution if either Samsung or Huawei is a Member of Unified Patents. *See Fintiv*, Paper 11 at 5-6. But Unified Patents has withheld that information.

The identity of Unified Patent Member(s) is also material to the *General Plastic* analysis because Apple, another defendant in the Parallel Litigations, also filed a petition for *inter partes* review of the '431 Patent (IPR2021-00920) within a week of when Unified Patents filed this Petition. What's more, each and every ground in the Apple IPR overlaps with Ground 3 in this Petition (the Numazaki reference). *Compare* Pet., p. 5 with *Apple Inc. v. Gesture Technology Partners LLC*, No. IPR2021-00920, Paper 1 at 4. Two petitions for *inter partes* review, filed within one week of each other, based on the same prior art, is exactly the type of improper "repeated attacks on patents" identified in *General Plastic*. *General Plastic*, Paper 19 at 17. Whether Apple is a Unified Member is material to several of the *General Plastic* factors. *See id.* at 16. But neither Unified Patents nor Apple has disclosed whether Apple is a Member of Unified Patents. *See* Ex. 1020; *Apple Inc. v. Gesture Technology Partners LLC*, No. IPR2021-00920, Paper 1 at 61-66.

Unified Patents should not be permitted to withhold material information and act as a proxy by filing petitions for *inter partes* review that are funded by and benefit its Members that are subject to parallel litigation. Accordingly, the Board should

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exercise its discretion and deny institution of the Petition. In the alternative, Patent Owner requests that the Board compel Unified Patents to disclose whether each of the defendants in the Parallel Litigations is a Member to provide the Board and Patent Owner a full and fair opportunity to address the *Fintiv* and *General Plastic* factors.

V. THE PETITION SHOULD BE DENIED BECAUSE THE BOARD DOES NOT HAVE JURISDICTION OVER EXPIRED PATENTS

35 U.S.C. § 2(a)(1) states that the United States Patent and Trademark Office “shall be responsible for the granting and issuing of patents. . . .” The Patent Trial Appeal Board is required to “conduct inter partes reviews and post-grant reviews pursuant to chapters 31 and 32.” 35 U.S.C. § 6(b)(4). The burden of proof required to find a claim unpatentable is the preponderance of evidence, which is a lower burden of proof than the clear and convincing standard applied in district courts. 35 U.S.C. § 316(a)(9) requires that the Director “set forth standards and procedures for allowing the patent owner to move to amend the patent under subsection(d).” This is due, in part, to the fact that there is a lower burden of proof required to invalidate a patent before the Board.

The ’431 Patent has expired, so the opportunity to amend the ’431 Patent is not available to Patent Owner. As a result, determinations regarding the validity of

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this expired patent should be reserved for Article III courts under the clear and convincing standard.

VI. CONCLUSION

The Petition should be denied. Petitioner has not established that the cited references render unpatentable any claim of the '431 Patent. Alternatively, the Board should exercise its discretion under 35 U.S.C. § 314(a) to deny institution.

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CERTIFICATE OF COMPLIANCE

Pursuant to 37 C.F.R. § 42.24(d), I hereby certify that the foregoing Patent Owner's Preliminary Response contains 7,066 words as measured by the word processing software used to prepare the document, excluding the cover page, signature block, and portions exempted under 37 C.F.R. § 42.24(a) or (b).

DATED: August 26, 2021

Respectfully submitted,

By: /Todd E. Landis/
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Registration No. 44,200
Counsel for Patent Owner

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CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. § 42.6, the undersigned certifies that on August 26, 2021, the foregoing document was served on counsel of record for Petitioner by filing this document through the End-to-End System, as well as via electronic mail to counsel of record for Petitioner at the following address: Raghav Baja (raghav.bajaj.ipr@haynesboone.com), Ashraf Fawzy (afawzy@unifiedpatents.com); Alyssa Holtslander (alyssa@unifiedpatents.com); David L. McCombs (david.mccombs.ipr@haynesboone.com); Angela Oliver (angela.oliver.ipr@hynesboone.com).

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